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Sequence Listing was accepted with existing errors.

See attached Validation Report.

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217-9197 (toll free).

Reviewer: Durreshwar Anjum

Timestamp: Wed May 30 12:38:59 EDT 2007

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Application No: 10569163 Version No: 1.0

Input Set:

Output Set:

Started: 2007-05-24 13:47:50.634
Finished: 2007-05-24 13:47:51.148
Elapsed: 0 hr(s) 0 min(s) 0 sec(s) 514 ms
Total Warnings: 0
Total Errors: 2
No. of SeqIDs Defined: 2
Actual SeqID Count: 2

| Error code | Error Description |
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| E 287 | Invalid WIPO ST.2 date format; Use (YYYY-MM-DD) in <151> |
| E 201 | Mandatory field data missing in <223> in SEQ ID (1) |

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<141> 2007-05-24

<150> US 60/498,655

<151> 2003/08/29

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<170> PatentIn version 3.1

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ccaggctccc aggactgtc cagaaccgag ggaagctcgg gtcctccaa gctagccatg 240

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ggcagccagc ggggggtggg accacgggca ccagagaag gtcctccaca catcccagcg 480

ccggctcccc gcc atg gag ccc ttg aag agc ctc ttc ctc aag agc cct 529

Met Glu Pro Leu Lys Ser Leu Phe Leu Lys Ser Pro

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cta ggg tca tgg aat ggc agt ggc agc ggg ggt ggt ggg ggc ggt gga 577

Leu Gly Ser Trp Asn Gly Ser Gly Ser Gly Gly Gly Gly Gly Gly Gly

15

20

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gga ggc cgg cct gag ggg tct cca aag gca gcg ggt tat gcc aac ccg 625

Gly Gly Arg Pro Glu Gly Ser Pro Lys Ala Ala Gly Tyr Ala Asn Pro

30

35

40

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| gtg | tgg | aca | gcc | ctg | ttc | gac | tac | gag | ccc | agt | ggg | cag | gat | gag | ctg | 673 |
| Val | Trp | Thr | Ala | Leu | Phe | Asp | Tyr | Glu | Pro | Ser | Gly | Gln | Asp | Glu | Leu | |
| 45 | | | | 50 | | | | 55 | | | | 60 | | | | |
| gcc | ctg | agg | aag | ggg | gac | cgt | gtg | gag | gtg | ctg | tcc | cgg | gac | gca | gcc | 721 |
| Ala | Leu | Arg | Lys | Gly | Asp | Arg | Val | Glu | Val | Leu | Ser | Arg | Asp | Ala | Ala | |
| 65 | | | | 70 | | | | 75 | | | | | | | | |
| atc | tca | gga | gac | gag | ggc | tgg | tgg | gcg | ggc | cag | gtg | ggg | ggc | cag | gtg | 769 |
| Ile | Ser | Gly | Asp | Glu | Gly | Trp | Trp | Ala | Gly | Gln | Val | Gly | Gly | Gln | Val | |
| 80 | | | | 85 | | | | 90 | | | | | | | | |
| ggc | atc | ttc | ccg | tcc | aac | tat | gtg | tct | cgg | ggg | ggg | ggc | ccg | ccc | ccc | 817 |
| Gly | Ile | Phe | Pro | Ser | Asn | Tyr | Val | Ser | Arg | Gly | Gly | Gly | Pro | Pro | Pro | |
| 95 | | | | 100 | | | | 105 | | | | | | | | |
| tgc | gag | gtg | gcc | agc | ttc | cag | gag | ctg | cgg | ctg | gag | gag | gtg | atc | ggc | 865 |
| Cys | Glu | Val | Ala | Ser | Phe | Gln | Glu | Leu | Arg | Leu | Glu | Glu | Val | Ile | Gly | |
| 110 | | | | 115 | | | | 120 | | | | | | | | |
| att | gga | ggc | ttt | ggc | aag | gtg | tac | agg | ggc | agc | tgg | cga | ggg | gag | ctg | 913 |
| Ile | Gly | Gly | Phe | Gly | Lys | Val | Tyr | Arg | Gly | Ser | Trp | Arg | Gly | Glu | Leu | |
| 125 | | | | 130 | | | | 135 | | | | 140 | | | | |
| gtg | gct | gtg | aag | gca | gct | cgc | cag | gac | ccc | gat | gag | gac | atc | agt | gtg | 961 |
| Val | Ala | Val | Lys | Ala | Ala | Arg | Gln | Asp | Pro | Asp | Glu | Asp | Ile | Ser | Val | |
| 145 | | | | 150 | | | | 155 | | | | | | | | |
| aca | gcc | gag | agc | gtt | cgc | cag | gag | gcc | cgg | ctc | ttc | gcc | atg | ctg | gca | 1009 |
| Thr | Ala | Glu | Ser | Val | Arg | Gln | Glu | Ala | Arg | Leu | Phe | Ala | Met | Leu | Ala | |
| 160 | | | | 165 | | | | 170 | | | | | | | | |
| cac | ccc | aac | atc | att | gcc | ctc | aag | gct | gtg | tgc | ctg | gag | gag | ccc | aac | 1057 |
| His | Pro | Asn | Ile | Ile | Ala | Leu | Lys | Ala | Val | Cys | Leu | Glu | Glu | Pro | Asn | |
| 175 | | | | 180 | | | | 185 | | | | | | | | |
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| Leu | Cys | Leu | Val | Met | Glu | Tyr | Ala | Ala | Gly | Gly | Pro | Leu | Ser | Arg | Ala | |
| 190 | | | | 195 | | | | 200 | | | | | | | | |
| ctg | gcc | ggg | cgg | cgc | gtg | cct | ccc | cat | gtg | ctg | gtc | aac | tgg | gct | gtg | 1153 |
| Leu | Ala | Gly | Arg | Arg | Val | Pro | Pro | His | Val | Leu | Val | Asn | Trp | Ala | Val | |
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| cag | att | gcc | cgt | ggg | atg | cac | tac | ctg | cac | tgc | gag | gcc | ctg | gtg | ccc | 1201 |
| Gln | Ile | Ala | Arg | Gly | Met | His | Tyr | Leu | His | Cys | Glu | Ala | Leu | Val | Pro | |
| 225 | | | | 230 | | | | 235 | | | | | | | | |
| gtc | atc | cac | cgt | gat | ctc | aag | tcc | aac | aac | att | ttg | ctg | ctg | cag | ccc | 1249 |
| Val | Ile | His | Arg | Asp | Leu | Lys | Ser | Asn | Asn | Ile | Leu | Leu | Leu | Gln | Pro | |
| 240 | | | | 245 | | | | 250 | | | | | | | | |
| att | gag | agt | gac | gac | atg | gag | cac | aag | acc | ctg | aag | atc | acc | gac | ttt | 1297 |
| Ile | Glu | Ser | Asp | Asp | Met | Glu | His | Lys | Thr | Leu | Lys | Ile | Thr | Asp | Phe | |
| 255 | | | | 260 | | | | 265 | | | | | | | | |

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| ggc ctg gcc cga gag tgg cac aaa acc aca caa atg agt gcc gcg ggc | 1345 |
| Gly Leu Ala Arg Glu Trp His Lys Thr Thr Gln Met Ser Ala Ala Gly | |
| 270 275 280 | |
| acc tac gcc tgg atg gct cct gag gtt atc aag gcc tcc acc ttc tct | 1393 |
| Thr Tyr Ala Trp Met Ala Pro Glu Val Ile Lys Ala Ser Thr Phe Ser | |
| 285 290 295 300 | |
| aag ggc agt gac gtc tgg agt ttt ggg gtg ctg ctg tgg gaa ctg ctg | 1441 |
| Lys Gly Ser Asp Val Trp Ser Phe Gly Val Leu Leu Trp Glu Leu Leu | |
| 305 310 315 | |
| acc ggg gag gtg cca tac cgt ggc att gac tgc ctt gct gtg gcc tat | 1489 |
| Thr Gly Glu Val Pro Tyr Arg Gly Ile Asp Cys Leu Ala Val Ala Tyr | |
| 320 325 330 | |
| ggc gta gct gtt aac aag ctc aca ctg ccc atc cca tcc acc tgc ccc | 1537 |
| Gly Val Ala Val Asn Lys Leu Thr Leu Pro Ile Pro Ser Thr Cys Pro | |
| 335 340 345 | |
| gag ccc ttc gca cag ctt atg gcc gac tgc tgg gcg cag gac ccc cac | 1585 |
| Glu Pro Phe Ala Gln Leu Met Ala Asp Cys Trp Ala Gln Asp Pro His | |
| 350 355 360 | |
| cgc agg ccc gac ttc gcc tcc atc ctg cag cag ttg gag gcg ctg gag | 1633 |
| Arg Arg Pro Asp Phe Ala Ser Ile Leu Gln Gln Leu Glu Ala Leu Glu | |
| 365 370 375 380 | |
| gca cag gtc cta cgg gaa atg ccg cgg gac tcc ttc cat tcc atg cag | 1681 |
| Ala Gln Val Leu Arg Glu Met Pro Arg Asp Ser Phe His Ser Met Gln | |
| 385 390 395 | |
| gaa ggc tgg aag cgc gag atc cag ggt ctc ttc gac gag ctg cga gcc | 1729 |
| Glu Gly Trp Lys Arg Glu Ile Gln Gly Leu Phe Asp Glu Leu Arg Ala | |
| 400 405 410 | |
| aag gaa aag gaa cta ctg agc cgc gag gag gag ctg acg cga gcg gcg | 1777 |
| Lys Glu Lys Glu Leu Leu Ser Arg Glu Glu Glu Leu Thr Arg Ala Ala | |
| 415 420 425 | |
| cgc gag cag cgg tca cag gcg gag cag ctg cgg cgg cgc gag cac ctg | 1825 |
| Arg Glu Gln Arg Ser Gln Ala Glu Gln Leu Arg Arg Arg Glu His Leu | |
| 430 435 440 | |
| ctg gcc cag tgg gag cta gag gtg ttc gag cgc gag ctg acg ctg ctg | 1873 |
| Leu Ala Gln Trp Glu Leu Glu Val Phe Glu Arg Glu Leu Thr Leu Leu | |
| 445 450 455 460 | |
| ctg cag cag gtg gac cgc gag cga ccg cac gtg cgc cgc cgc cgc ggc | 1921 |
| Leu Gln Gln Val Asp Arg Glu Arg Pro His Val Arg Arg Arg Arg Gly | |
| 465 470 475 | |
| aca ttc aag cgc agc aag ctc cgg gcg cgc gac ggc ggc gag cgt atc | 1969 |
| Thr Phe Lys Arg Ser Lys Leu Arg Ala Arg Asp Gly Gly Glu Arg Ile | |
| 480 485 490 | |
| agc atg cca ctc gac ttc aag cac cgc atc acc gtg cag gcc tca ccc | 2017 |

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| Ser Met Pro Leu Asp Phe Lys His Arg Ile Thr Val Gln Ala Ser Pro | |
| 495 | 500 505 |
| ggc ctt gac cgg agg aga aac gtc ttc gag gtc ggg cct ggg gat tcg | 2065 |
| Gly Leu Asp Arg Arg Arg Asn Val Phe Glu Val Gly Pro Gly Asp Ser | |
| 510 | 515 520 |
| ccc acc ttt ccc cgg ttc cga gcc atc cag ttg gag cct gca gag cca | 2113 |
| Pro Thr Phe Pro Arg Phe Arg Ala Ile Gln Leu Glu Pro Ala Glu Pro | |
| 525 | 530 535 540 |
| ggc cag gca tgg ggc cgc cag tcc ccc cga cgt ctg gag gac tca agc | 2161 |
| Gly Gln Ala Trp Gly Arg Gln Ser Pro Arg Arg Leu Glu Asp Ser Ser | |
| 545 | 550 555 |
| aat gga gag cgg cga gca tgc tgg gct tgg ggt ccc agt tcc ccc aag | 2209 |
| Asn Gly Glu Arg Arg Ala Cys Trp Ala Trp Gly Pro Ser Ser Pro Lys | |
| 560 | 565 570 |
| cct ggg gaa gcc cag aat ggg agg aga agg tcc cgc atg gac gaa gcc | 2257 |
| Pro Gly Glu Ala Gln Asn Gly Arg Arg Arg Ser Arg Met Asp Glu Ala | |
| 575 | 580 585 |
| aca tgg tac ctg gat tca gat gac tca tcc ccc tta gga tct cct tcc | 2305 |
| Thr Trp Tyr Leu Asp Ser Asp Asp Ser Ser Pro Leu Gly Ser Pro Ser | |
| 590 | 595 600 |
| aca ccc cca gca ctc aat ggt aac ccc ccg cgg cct agc ctg gag ccc | 2353 |
| Thr Pro Pro Ala Leu Asn Gly Asn Pro Pro Arg Pro Ser Leu Glu Pro | |
| 605 | 610 615 620 |
| gag gag ccc aag agg cct gtc ccc gca gag cgc ggt agc agc tct ggg | 2401 |
| Glu Glu Pro Lys Arg Pro Val Pro Ala Glu Arg Gly Ser Ser Ser Gly | |
| 625 | 630 635 |
| acg ccc aag ctg atc cag cgg gcg ctg ctg cgc ggc acc gcc ctg ctc | 2449 |
| Thr Pro Lys Leu Ile Gln Arg Ala Leu Leu Arg Gly Thr Ala Leu Leu | |
| 640 | 645 650 |
| gcc tcg ctg ggc ctt ggc cgc gac ctg cag ccg ccg gga ggc cca gga | 2497 |
| Ala Ser Leu Gly Leu Gly Arg Asp Leu Gln Pro Pro Gly Gly Pro Gly | |
| 655 | 660 665 |
| cgc gag cgc ggg gag tcc ccg aca aca ccc ccc acg cca acg ccc gcg | 2545 |
| Arg Glu Arg Gly Glu Ser Pro Thr Thr Pro Pro Thr Pro Thr Pro Ala | |
| 670 | 675 680 |
| ccc tgc ccg acc gag ccg ccc cct tcc ccg ctc atc tgc ttc tcg ctc | 2593 |
| Pro Cys Pro Thr Glu Pro Pro Pro Ser Pro Leu Ile Cys Phe Ser Leu | |
| 685 | 690 695 700 |
| aag acg ccc gac tcc ccg ccc act cct gca ccc ctg ttg ctg gac ctg | 2641 |
| Lys Thr Pro Asp Ser Pro Pro Thr Pro Ala Pro Leu Leu Leu Asp Leu | |
| 705 | 710 715 |
| ggt atc cct gtg ggc cag cgg tca gcc aag agc ccc cga cgt gag gag | 2689 |
| Gly Ile Pro Val Gly Gln Arg Ser Ala Lys Ser Pro Arg Arg Glu Glu | |

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| gag ccc cgc gga ggc act gtc tca ccc cca ccg ggg aca tca cgc tct | | | 2737 |
| Glu Pro Arg Gly Gly Thr Val Ser Pro Pro Pro Gly Thr Ser Arg Ser | | | |
| 735 | 740 | 745 | |
| gct cct ggc acc cca ggc acc cca cgt tca cca ccc ctg ggc etc atc | | | 2785 |
| Ala Pro Gly Thr Pro Gly Thr Pro Arg Ser Pro Pro Leu Gly Leu Ile | | | |
| 750 | 755 | 760 | |
| agc cga cct cgg ccc tcg ccc ctt cgc agc cgc att gat ccc tgg agc | | | 2833 |
| Ser Arg Pro Arg Pro Ser Pro Leu Arg Ser Arg Ile Asp Pro Trp Ser | | | |
| 765 | 770 | 775 | 780 |
| ttt gtg tca gct ggg cca cgg cct tct ccc ctg cca tca cca cag cct | | | 2881 |
| Phe Val Ser Ala Gly Pro Arg Pro Ser Pro Leu Pro Ser Pro Gln Pro | | | |
| 785 | 790 | 795 | |
| gca ccc cgc cga gca ccc tgg acc ttg ttc ccg gac tca gac ccc ttc | | | 2929 |
| Ala Pro Arg Arg Ala Pro Trp Thr Leu Phe Pro Asp Ser Asp Pro Phe | | | |
| 800 | 805 | 810 | |
| tgg gac tcc cca cct gcc aac ccc ttc cag ggg ggc ccc cag gac tgc | | | 2977 |
| Trp Asp Ser Pro Pro Ala Asn Pro Phe Gln Gly Gly Pro Gln Asp Cys | | | |
| 815 | 820 | 825 | |
| agg gca cag acc aaa gac atg ggt gcc cag gcc ccg tgg gtg ccg gaa | | | 3025 |
| Arg Ala Gln Thr Lys Asp Met Gly Ala Gln Ala Pro Trp Val Pro Glu | | | |
| 830 | 835 | 840 | |
| gcg ggg cct tga gtggggcagg ccactcccc gagctccagc tgccttagga | | | 3077 |
| Ala Gly Pro | | | |
| 845 | | | |
| ggagtcacag catacactgg aacaggagct gggtcagcct ctgcagctgc ctcagtttcc | | | 3137 |
| ccagggaccc cccccccctt tgggggtcag gaacactaca ctgcacagga agccttcaca | | | 3197 |
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Leu Phe Asp Tyr Glu Pro Ser Gly Gln Asp Glu Leu Ala Leu Arg Lys
50 55 60

Gly Asp Arg Val Glu Val Leu Ser Arg Asp Ala Ala Ile Ser Gly Asp
65 70 75 80

Glu Gly Trp Trp Ala Gly Gln Val Gly Gly Gln Val Gly Ile Phe Pro
85 90 95

Ser Asn Tyr Val Ser Arg Gly Gly Gly Pro Pro Pro Cys Glu Val Ala
100 105 110

Ser Phe Gln Glu Leu Arg Leu Glu Glu Val Ile Gly Ile Gly Gly Phe
115 120 125

Gly Lys Val Tyr Arg Gly Ser Trp Arg Gly Glu Leu Val Ala Val Lys
130 135 140

Ala Ala Arg Gln Asp Pro Asp Glu Asp Ile Ser Val Thr Ala Glu Ser
145 150 155 160

Val Arg Gln Glu Ala Arg Leu Phe Ala Met Leu Ala His Pro Asn Ile
165 170 175

Ile Ala Leu Lys Ala Val Cys Leu Glu Glu Pro Asn Leu Cys Leu Val
180 185 190

Met Glu Tyr Ala Ala Gly Gly Pro Leu Ser Arg Ala Leu Ala Gly Arg
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Arg Val Pro Pro His Val Leu Val Asn Trp Ala Val Gln Ile Ala Arg
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Gly Met His Tyr Leu His Cys Glu Ala Leu Val Pro Val Ile His Arg
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Asp Leu Lys Ser Asn Asn Ile Leu Leu Leu Gln Pro Ile Glu Ser Asp
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Asp Met Glu His Lys Thr Leu Lys Ile Thr Asp Phe Gly Leu Ala Arg
260 265 270

Glu Trp His Lys Thr Thr Gln Met Ser Ala Ala Gly Thr Tyr Ala Trp
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Met Ala Pro Glu Val Ile Lys Ala Ser Thr Phe Ser Lys Gly Ser Asp
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Val Trp Ser Phe Gly Val Leu Leu Trp Glu Leu Leu Thr Gly Glu Val
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Pro Tyr Arg Gly Ile Asp Cys Leu Ala Val Ala Tyr Gly Val Ala Val
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Gln Leu Met Ala Asp Cys Trp Ala Gln Asp Pro His Arg Arg Pro Asp
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Phe Ala Ser Ile Leu Gln Gln Leu Glu Ala Leu Glu Ala Gln Val Leu
370 375 380

Arg Glu Met Pro Arg Asp Ser Phe His Ser Met Gln Glu Gly Trp Lys
385 390 395 400

Arg Glu Ile Gln Gly Leu Phe Asp Glu Leu Arg Ala Lys Glu Lys Glu
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Leu Leu Ser Arg Glu Glu Glu Leu Thr Arg Ala Ala Arg Glu Gln Arg
420 425 430

Ser Gln Ala Glu Gln Leu Arg Arg Arg Glu His Leu Leu Ala Gln Trp
435 440 445

Glu Leu Glu Val Phe